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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,208	07/07/2003	Efstratios Skafidas	52637-0063	8053

29989 7590 08/02/2006

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EXAMINER	
DAO, MINH D	

ART UNIT	PAPER NUMBER
2618	

DATE MAILED: 08/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,208	SKAFIDAS ET AL.	
	Examiner	Art Unit	
	MINH D. DAO	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24,37 and 38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24,37 and 38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 1-24,37,38 in the reply filed on 05/18/06 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

3. Claims 1-24,37,38 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (US 2006/0025150).

Regarding claim 1, Kim teaches a wireless communications apparatus comprising: a first antenna arrangement configured to transmit and receive communications signals on a first communications channel within a first section of a spatial area around the wireless communications apparatus, wherein the first antenna arrangement is further configured to determine whether the first communications channel is currently being used to carry communication signals before transmitting any communication signals onto the first communications channel (see sections [0007,0011,0065,0066]); also see figs. 5 and 6); and a second antenna arrangement configured to transmit and receive

communications signals on a second communications channel within a second section of the spatial area around the wireless communications apparatus, wherein the second antenna arrangement is further configured to determine whether the second communications channel is currently being used to carry communication signals before transmitting any communication signals onto the second communications channel (see sections [0007,0011,0065,0066]); also see figs. 5 and 6). In this case, the different azimuths of the sectors in figs. 5 and 6 read on the antenna arrangements of the present invention.

Regarding claim 2, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first and second sections of the spatial area around the wireless communications apparatus do not overlap and are not adjacent to each other (see sections [0065,0066]; also see figs. 5 and 6).

Regarding claim 3, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first and second sections of the spatial area around the wireless communications apparatus are adjacent to each other (see sections [0065,0066]; also see figs. 5 and 6).

Regarding claim 4, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first and second sections of the spatial area around the wireless communications apparatus are different sizes (see sections [0065,0066]; also see figs.

5 and 6). The teaching of cell clusters of Kim also inherently teaches that the spatial area around the wireless communications apparatus are different sizes because it is a well known fact in the art of cellular planning that each sector of a cell site is capable of operate at different power based on the coverage need in the covered areas for the purpose of saving power.

Regarding claim 5, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first antenna arrangement is further configured to transmit and receive communications signals on a third communications channel within the first section of the spatial area around the wireless communications apparatus, wherein the third communications channel is on a different frequency within the same frequency band as the first communications channel (see sections [0065-0068]).

Regarding claim 6, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first antenna arrangement is further configured to transmit and receive communications signals on a third communications channel within the first section of the spatial area around the wireless communications apparatus, wherein the third communications channel is in a different frequency band than the first communications channel (see section [0013,0023,0029-0031]).

Regarding claim 7, Kim teaches the wireless communications apparatus as recited in claim 6, wherein the first communications channel is in the IEEE 802.1 1(a) frequency band and the third communications channel is in the IEEE 802.1 1(b) frequency band (see section [0013,0023,0029-0031]).

Regarding claim 8, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first antenna arrangement is further configured to transmit and receive communications signals on the first communications channel using a time division multiple access communications protocol (see section [0022]).

Regarding claim 9, Kim teaches the wireless communications apparatus as recited in claim 8, wherein a carrier sense mechanism is used to select the first and second communications channels (see sections [0007,0011,0065,0066]).

Regarding claim 10, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first antenna arrangement is further configured to determine whether the first communications channel is currently being used to carry communication signals before transmitting any communication signals onto the first communications channel using a carrier sense mechanism (see sections [0007,0011,0065,0066]).

Regarding claim 11, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the wireless communications apparatus is a wireless access point communicatively coupled to a wired network (see fig. 1).

Regarding claim 12, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first antenna arrangement and the second antenna arrangement are configured to allow simultaneous separate communications on the first and second communications channels (se section [0068]).

Regarding claim 13, Kim teaches the wireless communications apparatus as recited in claim 12, wherein the first and second communications channels are the same frequency (see section [0007]).

Regarding claim 14, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first and second antenna arrangements are configured with different polarization orientations (see section [0065-0066]).

Regarding claim 15, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first and second communications channels are selected to reduce interference between the first and second sections (see section [0068]).

Regarding claim 16, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first and second antenna arrangements are configured to reduce interference between the first and second sections (see sections [0065-0068]).

Regarding claim 17, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the wireless communications apparatus is configured to dynamically change the size of the first section (see section [0045]).

Regarding claim 18, Kim teaches the wireless communications apparatus as recited in claim 1, further comprising a manager mechanism configured to aggregate data received from the first and second antenna managements (see fig. 2; section [0024]).

Regarding claim 19, since Kim teaches a wireless network with Aps (figs. 5,6), Kim inherently teaches that when the wireless device moves from one sector to another sector, as it is a well known fact in the art of wireless communication that the cell site or master AP should keep a record of the mobile device movement for the purpose of tracking the performance of the mobile device.

Regarding claim 20, Kim teaches the wireless communications apparatus as recited in claim 1, further comprising a switch configured to provide for the switching of data between the first and second antenna arrangements (see fig. 2; section [0024]).

Regarding claim 21, Kim teaches the wireless communications apparatus as recited in claim 1, further comprising a switch configured to provide for the switching of data between the first antenna arrangement and a network (see fig. 2; section [0024]).

Regarding claim 22, since Kim teaches a wireless network with Aps (figs. 5,6), Kim inherently teaches that the power and antenna sensitivities of the antenna of each sector can be managed to change to accommodate the coverage and capacity need of each sector.

Regarding claim 23, Kim teaches the wireless communications apparatus as recited in claim 1, wherein the first antenna arrangement is configured to selectively and separately manage transmit power levels on a per-wireless device basis (see section [0045]).

Regarding claim 24, Kim teaches a wireless access point for providing wireless access to a wired network within a building, the wireless access point comprising: a first antenna arrangement configured to communicate with wireless devices within a first section of a spatial area around the wireless access point, wherein the first antenna arrangement is further configured to determine whether a first communications channel assigned to the first section of the spatial area is currently being used to carry communication signals before transmitting any communication signals onto the first communications channel; a second antenna arrangement configured to communicate

with wireless devices within a second section of ((a)) the spatial area around the wireless access point, wherein the second antenna arrangement is further configured to determine whether a second communications channel assigned to the second section of the spatial area is currently being used to carry communication signals before transmitting any communication signals onto the second communications channel (see sections [0007,0011,0065,0066]); also see figs. 5 and 6). In this case, the different azimuths of the sectors in figs. 5 and 6 read on the antenna arrangements of the present invention; and a management mechanism configured to manage the operation of the first and second antenna arrangements and to manage the exchange of data between wireless devices in the first and second sections of the spatial area and the wired network in the building (see fig. 2; section [0024]). In addition, the AP network configuration can inherently be deployed in a building.

Regarding claim 37, Kim teaches a wireless communications system comprising: a first antenna arrangement having a first transceiver configured to transmit and receive communications signals on a communications channel within a first section of a spatial area around the wireless communications system; a second antenna arrangement having a second transceiver configured to transmit and receive communications signals on the communications channel within a second section of the spatial area around the wireless communications system; and wherein a carrier sense multiple access, collision avoidance algorithm based on carrier sense or energy detect, or a point coordinating function is used to allow communications on the communications channel in both the

first and second sections to occur (see sections [0007,0011,0065,0066]); also see figs. 5 and 6). In this case, the different azimuths of the sectors in figs. 5 and 6 read on the antenna arrangements of the present invention.

Regarding claim 38, Kim teaches the wireless communications apparatus as recited in Claim 37, further comprising a network manager configured to control the transfer of data between the first and second sections and a network (see fig. 2; section [0024]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH D. DAO whose telephone number is 571-272-7851. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW ANDERSON can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Minh Dao
AU 2618
July 27, 2006

Matthew Anderson
Superviser AU 2618